

**Stony Brook**

December 28, 1979

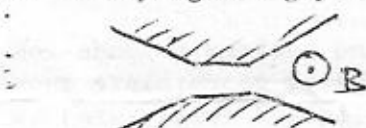
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Dear Friends of LAPDOG/EAGER/LAUGHS:

This is a reminder of our discussion last time and a suggestion for an agenda of our next meeting.

At the December 19 meeting, there were several reports on specific areas which raised a few new questions to be examined by our next session:

1) The open dipole magnet was estimated at just under \$1 M for an axial field volume of  $(8 \times 8 \times 2\frac{1}{2})\text{ft}^3$ . This price is not too certain and needs a little more detailed study. Several questions were raised which indicate the need for understanding how possible modifications would effect the magnet cost and feasibility. Included in these are:  
a) The nature of the fringe field in such a magnet; b) The possibility of modifying the gap shape to maximize the useful field region



(for example pole-tip tapering as indicated on the sketch)

c) How much can such a magnet be opened up to increase solid angle and d) What is the maximum field strength one can envision?

2) Muon detection: Over what angular range is muon identification feasible? Are muon signs determined unambiguously over all momenta? Is there a case for slots in the return iron to aid in muon identification? Can some scheme for  $\mu$  focussing be devised that might allow stopping  $\mu$  (polarization) studies to be pursued?

3) Shower detectors: The possibility of dissolving Pb salts in mineral oil was raised as a cheap alternative to Pb-glass. We should pursue this technique with tests this spring.

Marx and Gibband proposed an alternative to the open dipole field which employs a smaller, cheaper solenoid. This scheme has many interesting features and we felt that it should percolate until our next meeting. At that time however, I feel we should attempt